

WHAT IS CLAIMED IS:

1 1. A method for stabilizing the performance variation of a
2 primary radio frequency (RF) device, comprising:

3 providing a secondary RF device;

4 generating an output signal with the secondary RF
5 device;

6 providing the output signal to a feedback circuit;

7 generating a feedback signal based on the output signal
8 with the feedback circuit;

9 providing the feedback signal to the secondary RF
10 device;

11 generating the output signal further comprising
12 generating the output signal based on the feedback signal; and
13 providing the feedback signal to the primary RF device.

1 2. The method of Claim 1, further comprising:

2 receiving a reference signal; and

3 generating the feedback signal further comprising
4 generating the feedback signal based on the reference signal.

1 3. The method of Claim 2, the reference signal comprising
2 a reference voltage.

1 4. The method of Claim 1, the secondary RF device
2 configured as an oscillator.

1 5. The method of Claim 4, the feedback circuit comprising
2 a peak detector, the method further comprising:

3 receiving the output signal at the peak detector; and
4 detecting an oscillation magnitude for the output
5 signal with the peak detector.

1 6. The method of Claim 1, further comprising:

2 amplifying the feedback signal to generate an amplified
3 feedback signal; and

4 providing the feedback signal to the primary RF device
5 comprising providing the amplified feedback signal to the primary
6 RF device.

1 7. The method of Claim 1,

2 providing the feedback signal to the primary RF device
3 comprising providing the feedback signal to the primary RF device
4 through a primary bias control; and

5 providing the feedback signal to the secondary RF
6 device comprising providing the feedback signal to the secondary
7 RF device through a secondary bias control.

1 8. A system for stabilizing the performance variation of a
2 primary radio frequency (RF) device, comprising:

3 a secondary RF device operable to generate an output
4 signal;

5 a feedback circuit coupled to the secondary RF device,
6 the feedback circuit operable to receive the output signal, to
7 generate a feedback signal based on the output signal, to provide
8 the feedback signal to the secondary RF device, and to provide
9 the feedback signal to the primary RF device; and

10 the secondary RF device further operable to generate
11 the output signal based on the feedback signal.

1 9. The system of Claim 8, further comprising a reference
2 circuit coupled to the feedback circuit, the reference circuit
3 operable to generate a reference signal, the feedback circuit
4 further operable to generate the feedback signal based on the
5 reference signal.

1 10. The system of Claim 9, the reference signal comprising
2 a reference voltage.

1 11. The system of Claim 8, the secondary RF device
2 configured as an oscillator.

1 12. The system of Claim 11, the feedback circuit comprising
2 a peak detector operable to receive the output signal and to
3 detect an oscillation magnitude for the output signal.

1 13. The system of Claim 8, further comprising an amplifier
2 coupled to the feedback circuit, the amplifier operable to
3 amplify the feedback signal to generate an amplified feedback
4 signal and to provide the amplified feedback signal to the
5 primary RF device.

1 14. The system of Claim 8, further comprising:
2 a primary bias control coupled to the primary RF device
3 and to the feedback circuit, the primary bias control operable to
4 provide the feedback signal to the primary RF device; and
5 a secondary bias control coupled to the secondary RF
6 device and to the feedback circuit, the secondary bias control
7 operable to provide the feedback signal to the secondary RF
8 device.

1 15. A system for processing a radio frequency (RF) signal,
2 comprising:

3 a primary RF device; and

4 a bias point stabilizer coupled to the primary RF
5 device, the bias point stabilizer comprising a secondary RF
6 device and operable to generate a feedback signal and to provide
7 the feedback signal to the primary RF device, the feedback signal
8 operable to stabilize the primary RF device.

1 16. .The system of Claim 15, the bias point stabilizer
2 further comprising a feedback circuit coupled to the secondary RF
3 device; the secondary RF device operable to generate an output
4 signal; the feedback circuit operable to receive the output
5 signal, to generate a feedback signal based on the output signal,
6 to provide the feedback signal to the secondary RF device, and to
7 provide the feedback signal to the primary RF device; the
8 secondary RF device further operable to generate the output
9 signal based on the feedback signal.

1 17. The system of Claim 16, the bias point stabilizer
2 further comprising a reference circuit coupled to the feedback
3 circuit, the reference circuit operable to generate a reference
4 signal, the feedback circuit further operable to generate the
5 feedback signal based on the reference signal.

1 18. The system of Claim 17, the reference signal comprising
2 a reference voltage.

1 19. The system of Claim 16, the secondary RF device
2 configured as an oscillator, the feedback circuit comprising a
3 peak detector operable to receive the output signal, to detect an
4 oscillation magnitude for the output signal, and to generate an
5 oscillation magnitude signal based on the detected oscillation
6 magnitude..

1 20. The system of Claim 19, the feedback circuit further
2 comprising an operational amplifier, the operational amplifier
3 comprising an inverting input node operable to receive the
4 reference signal, a non-inverting input node operable to receive
5 the oscillation magnitude signal, and an output node operable to
6 generate the feedback signal based on the reference signal and
7 the oscillation magnitude signal.